

Appendix L
Waste Management

Appendix L

Waste Management

L1. INTRODUCTION

This appendix discusses the handling and disposition of waste generated during the Phase II remedial activities at Auxiliary Reactor Area (ARA). Three sites are identified in this Work Plan for remedial activities (ARA-01, ARA-12, and ARA-23). Detailed regulatory and remedial strategies are contained in the Work Plan and in the Record of Decision (ROD) (DOE-ID 2000a).

Waste Generator Services is responsible for the management of all wastes generated during this project. Internal company procedures will be used for the identification, characterization, containerization, storage, and dispositioning of all wastes generated.

Sections 1.1 through 1.7 provide general guidance on waste management activities (i.e., waste minimization, segregation, packaging). These sections cite Environmental Protection Agency (EPA) regulations and management control procedures (MCPs) that apply to each specific activity. Section 1.8 provides site-specific summaries of remedial activities at each task site and the associated waste streams. Section 1.8 also provides volume estimates, anticipated waste classifications and waste codes, and probable disposition of each waste stream.

L1.1 Waste Minimization and Segregation

Waste minimization for this project will be primarily achieved through design and planning to maintain efficient operations. To achieve this goal, waste streams will be segregated primarily by the field activity that is being conducted at the time of generation.

Conditional and nonconditional industrial wastes will be segregated from hazardous and radioactive wastes. Other wastes that may be generated during these activities include low-level waste, Resource Conservation and Recovery Act (RCRA)-hazardous waste, or mixed low-level waste. Containers for the collection of these wastes will be clearly labeled to identify waste type and will be maintained inside the work area until removal for subsequent waste management activities.

L1.2 Packaging and Labeling

Containers used to store hazardous waste must meet the requirements of 40 *Code of Federal Regulations* (CFR) 264, Subpart I. The reusable property, recyclable materials, and waste acceptance criteria (RRWAC) (DOE-ID 1999) details the criteria for waste packaging. The RRWAC also provides guidance to ensure that the containers selected for storage are compatible with final disposition plans. This will alleviate the need for repackaging of the waste prior to shipment to a treatment or disposal facility. Contaminated soils will be transported for disposal end dump trucks with an anticipated capacity of 9.2 m³ (12 yd³) or greater.

The types of containers anticipated for storage include plastic bags, 19 L (5 gal) open top drums, and 208-L (55-gal) open top drums. These containers will be labeled with the standard green and yellow

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) labels. Information on the waste packaging will include the following:

- A unique bar code serial number
- Name of generating facility (i.e., OU 5-12)
- Phone number of generator contact
- Listed or characteristic waste code(s)
- Waste package gross weight
- Maximum radiation level on contact and at 1 m (3.3 ft) in air
- Waste stream or material identification number as assigned by the receiving facility
- Other labels and markings as required by 40 CFR 172 Subparts D and E.

Any of the above information that is not known when the waste is labeled may be added when the information becomes available. The Waste Generator Services (WGS) will provide the unique bar codes and serial numbers. A new bar code will be affixed to each container when waste is first placed in the container. Additionally, waste labels must be visible, legibly printed or stenciled, and placed so that a full set of labels and markings are readily visible.

L1.3 Laboratory Samples

All laboratory and sample waste is managed in accordance with the Sample Management Office master task agreements, as part of the contract for each subcontracted laboratory. In general, the laboratory will dispose of any unused sample material. The laboratories are responsible for any waste generated as a result of analyzing the samples. In the event that sample material must be returned from the laboratory, only the unused, unaltered samples in the original sample containers will be accepted from the laboratory. These samples will be returned to the waste stream from which they originated. If the laboratory must return altered sample material (e.g., analytical residues), the laboratory will specifically define the types of chemical additives used in the analytical process and assist in making a hazardous waste determination. This information will be provided to the project field team leader and environmental compliance coordinator. Management of this waste will also require separation from the other unaltered samples being returned.

L1.4 Storage and Inspection

Where applicable, waste will be stored in the CERCLA waste storage unit (CWSU) (PBF-ARA-1-CARGO-A) already established at ARA-I. Waste stored in the CWSU will be stored in compliance with the *CERCLA Waste Storage Area Plan for PBF-ARA-1-CARGO-A* (INEEL 1999). This plan will be modified as necessary to accommodate waste proposed for storage in the CWSU. If required due to space limitations, a new CERCLA storage area (CSA) will be established.

The CWSU (or CSA) will meet the requirements of 40 CFR 264 Subpart I. These regulations specify that weekly waste container inspections will be conducted at the CWSU (or CSA). The purpose

of the inspections is to look for containers that are leaking, evaluate the integrity of the containers, and verify that each container is labeled correctly. Inspections will be documented on the CWSU (or CSA) checklist that is maintained within each CWSU (or CSA). The MCP-3475, "Temporary Storage of CERCLA-Generated Waste at the INEEL," will be used as guidance for the storage and inspection of each CWSU (or CSA).

L1.5 Hazardous Waste Determinations

All wastes generated will be characterized as required under RCRA (40 CFR 262.11) and by DOE (Orders 435.1 and 5400.5). Based on the RCRA characterization, hazardous waste determinations will be performed and documented that assign the appropriate EPA waste codes. Hazardous waste determinations will be prepared for all wastes destined for disposal and that meet the requirements of all on-Site disposal facilities, including the ICDF and CFA Landfill. A hazardous waste determination uses one of two approaches, or a combination of both, to determine if the waste is RCRA hazardous:

1. Process knowledge may be used if there is sufficient existing information to characterize the waste. It may include direct knowledge of the source of the contamination and/or existing validated analytical data.
2. Analysis of representative samples of the waste stream may be performed by either specialized RCRA protocols, or standard protocols for sampling and laboratory analysis that are not specialized RCRA methods. Additionally, process knowledge may influence the amount of sampling and analysis required for characterization.

The MCP-3472, "Identification and Characterization of Environmentally Regulated Waste," addresses characterization requirements for waste to be transported to a RCRA treatment, storage, and disposal facility (TSDF). The INEEL-specific requirements for treatment, storage, and disposal of characterized waste are addressed in the RRWAC. Documentation of all hazardous waste determinations made for this project will be maintained in the INEEL Waste Tracking System (IWTS).

L1.6 Waste Disposition

At the conclusion of the investigation, or when deemed necessary, conditional industrial waste will be disposed to the CFA landfill, following the protocols and completing the forms identified in the RRWAC. To achieve this waste management activity, industrial waste will be turned over to Central Facilities Area (CFA)-operations personnel for management under existing facility waste streams and in accordance with standing facility procedures. When sufficient quantities of waste have been accumulated to ship to one of the INEEL waste management units or off the INEEL to a commercial waste management facility, WGS will be contacted and the appropriate forms completed and submitted for approval, as required. The waste generator interface will provide assistance in packaging and transportation of the waste.

Nonconditional wastes will consist of administrative waste such as paper products, non-contaminated clothing, lunch wastes, etc. These wastes can be placed in clear, plastic bags and placed in an appropriate container for shipment to the INEEL Landfill Complex for disposal. These wastes will be nonhazardous and nonradioactive and will not be tracked through the Integrated Waste Tracking System.

Radiological control technicians will be monitoring field activities and will notify personnel of any radiological conditions above background. Working with radiologically-contaminated materials will most likely generate contaminated personal protective equipment (PPE) (i.e., gloves, boots, shoe covers,

coveralls, etc.), as well as contaminated equipment. Both solid and liquid decontamination wastes may be generated during the decontamination of equipment. All contaminated waste will be containerized and stored for disposal at the INEEL CERCLA Disposal Facility (ICDF). Contaminated monitoring wastes will be included in this waste stream.

It is possible, but highly unlikely, that low-level mixed wastes may be generated during the remedial activities. Any low-level mixed wastes will be containerized and stored for disposal at the ICDF.

L1.7 Record Keeping and Reporting

Records and reports related to waste management are required to be maintained as identified by MCP-3475, "Temporary Storage of CERCLA-Generated Waste at the INEEL." These records shall include, but not be limited to, the following:

- Hazardous waste determination, characterization information, and statements of process knowledge
- CWSU and CSA inspection reports and log-in/log-out history
- Training records
- Documentation of all spills and/or findings.

L1.8 SITE-SPECIFIC WASTE STREAMS

This section provides site-specific summaries of activities at ARA-01, ARA-12, ARA-23. Estimates on volumes of waste, anticipated waste streams and waste codes, and probable final disposition are also included. Tables L-1 through L-6 provide a summary of the expected waste streams at each site.

L1.8.1 ARA-01 Summary of Remedial Activities

ARA-01 is a shallow, unlined surface impoundment, roughly 30 × 90 m (100 × 300 ft) in size. The pond received laboratory wastewater from the ARA-I Shop and Maintenance Building (ARA-627). Analytical results have indicated the presence of radionuclides, metals, and organics. The site presents an unacceptable human health risk due to the presence of arsenic and an unacceptable ecological risk due to selenium and thallium. The remediation of the ARA-01 site will include those activities outlined in Section 2.2.2 of the Phase II Work Plan.

L1.8.2 ARA-01 Waste Streams

Waste generated during the remediation of the ARA-01: ARA-I Chemical Evaporation Pond includes excavated soils, PPE, and plastic sheeting. Other potential waste streams include unused/unaltered samples, analytical residues, clean sample containers, hydraulic spills, contaminated equipment, and miscellaneous waste. The anticipated volumes and waste classifications of these waste streams are summarized in Table L-1.

L1.8.3 ARA-01 Disposition

Final disposition for these waste streams include disposal at the ICDF or another location within the INEEL (soils, PPE, plastic sheeting, unused/unaltered samples, analytical residues, and contaminated equipment) and disposal at the CFA landfill (clean sample containers, hydraulic fluids, and miscellaneous waste streams). Table L-2 summarizes the final disposition and packaging for each waste stream.

L1.8.4 ARA-12 Summary of Remedial Activities

ARA-12 is an unlined surface impoundment with approximate dimensions of 50 × 115 m (150 × 370 ft). The pond received low-level liquid waste from reactor research operations conducted at the ARA-III facility. Analytical results have indicated the presence of radionuclides and metals. The site presents an unacceptable human health risk due to the presence of Ag-108m, and an unacceptable ecological risk due to copper, mercury, and selenium. The remediation of the ARA-12 site will include those activities outlined in Section 2.2.2 of the Phase II Work Plan.

L1.8.5 ARA-12 Waste Streams

Waste generated during the remediation of the ARA-12: ARA-III Radioactive Waste Leach Pond includes excavated soils, PPE, and plastic sheeting. Other potential waste streams include unused/unaltered samples, analytical residues, clean sample containers, hydraulic spills, contaminated equipment, and miscellaneous waste. The anticipated volumes and waste classifications of these waste streams are summarized in Table L-3.

Table L-1. ARA-01 waste stream summary.

Waste Type	Anticipated Volume	Waste Classification	Waste Code
Project Site-Specific Waste			
Soils	1,821 m ³ (2,382 yd ³)	Low-level Radioactive	—
PPE	1.53 m ³ (2 yd ³)	Low-level Radioactive	—
Plastic Sheeting	1.53 m ³ (2 yd ³)	Low-level Radioactive	—
Other Potential Waste			
Unused/Unaltered Samples	< 0.03 m ³ (1.0 ft ³)	Low-level Radioactive	—
Analytical Residues	< 0.03 m ³ (1.0 ft ³)	Low-level Mixed	D002
Clean Sample Containers	< 0.03 m ³ (1.0 ft ³)	Conditional Industrial	—
Hydraulic Spills	< 0.77 m ³ (1 yd ³)	Conditional Industrial	—
Contaminated Equipment	No estimate	Low-level Radioactive	—
Miscellaneous	< 0.77 m ³ (1 yd ³)	Conditional Industrial	—

Table L-2. ARA-01 waste stream disposition.

Waste Type	Disposition	Packaging ^a
Project Site-Specific Waste		
Soils	ICDF ^b	Dump trucks
PPE	ICDF ^b	Bags
Plastic Sheeting	ICDF ^b	Bags
Other Potential Waste		
Unused/Unaltered Samples	ICDF ^b	19 L (5 gal) Drum
Analytical Residues	ICDF ^b	19 L (5 gal) Drum
Clean Sample Containers	CFA Landfill	19 L (5 gal) Drum
Hydraulic Spills	CFA Landfill	19 L (5 gal) to 208 L (55 gal) Drum
Contaminated Equipment	ICDF ^b	To Be Determined
Miscellaneous	CFA Landfill	Bags

a. The final packaging configuration will be coordinated with WGS personnel.

b. The ICDF is the primary disposal site; however, as per the ROD (DOE-ID 2000a), another location within the INEEL may be selected for permanent disposal.

Table L-3. ARA-12 Waste Stream Summary.

Waste Type	Anticipated Volume	Waste Classification	Waste Code
Project Site-Specific Waste			
Soils	1,503 m ³ (1,966 yd ³)	Low-level Radioactive	—
PPE	1.53 m ³ (2 yd ³)	Low-level Radioactive	—
Plastic Sheeting	1.53 m ³ (2 yd ³)	Low-level Radioactive	—
Other Potential Waste			
Unused/Unaltered Samples	< 0.03 m ³ (1.0 ft ³)	Low-level Radioactive	—
Analytical Residues	< 0.03 m ³ (1.0 ft ³)	Low-level Mixed	D002
Clean Sample Containers	< 0.03 m ³ (1.0 ft ³)	Conditional Industrial	—
Hydraulic Spills	< 0.77 m ³ (1 yd ³)	Conditional Industrial	—
Contaminated Equipment	No estimate	Low-level Radioactive	—
Miscellaneous	< 0.77 m ³ (1 yd ³)	Conditional Industrial	—

L1.8.6 ARA-12 Disposition

Final disposition for these waste streams include disposal at the ICDF or another location within the INEEL (soils, PPE, plastic sheeting, unused/unaltered samples, analytical residues, and contaminated equipment) and disposal at the CFA landfill (clean sample containers, hydraulic fluids, and miscellaneous waste streams). Table L-4 summarizes the final disposition and packaging for each waste stream.

L1.8.7 ARA-23 Summary of Remedial Activities

ARA-23 is a 17-ha (42-acre) windblown contamination area surrounding the ARA-I and ARA-II facilities. The site also contains subsurface structures remaining after decontamination and dismantlement (D&D) activities within the facilities. Analytical results have indicated the presence of radionuclides; therefore, wastes generated during the remediation of ARA-23 will be considered low-level radioactive. The site presents an unacceptable human health risk due to the presence of Cs-137. The remediation of the ARA-23 site will include those activities outlined in Section 2.2.2 of the Phase II Work Plan.

L1.8.8 ARA-23 Waste Streams

Waste generated during the remediation of the ARA-23: Radiologically Contaminated Surface Soils and Subsurface Structures Associated with ARA-I and ARA-II includes excavated soils, PPE, and plastic sheeting. Other potential waste streams include unused/unaltered samples, analytical residues, clean sample containers, hydraulic spills, contaminated equipment, and miscellaneous waste. The anticipated volumes and waste classifications of these waste streams are summarized in Table L-5.

L1.8.9 ARA-23 Disposition

Final disposition for these waste streams include disposal at the ICDF or another location within the INEEL (soils, PPE, plastic sheeting, unused/unaltered samples, analytical residues, and contaminated equipment) and disposal at the CFA landfill (clean sample containers, hydraulic fluids, and miscellaneous waste streams). Table L-6 summarizes the final disposition and packaging for each waste stream.

Table L-4. ARA-12 Waste Stream Disposition.

Waste Type	Disposition	Packaging ^a
Project Site-Specific Waste		
Soils	ICDF ^b	Dump trucks
PPE	ICDF ^b	Bags
Plastic Sheeting	ICDF ^b	Bags
Other Potential Waste		
Unused/Unaltered Samples	ICDF ^b	19 L (5 gal) Drum
Analytical Residues	ICDF ^b	19 L (5 gal) Drum
Clean Sample Containers	CFA Landfill	19 L (5 gal) Drum
Hydraulic Spills	CFA Landfill	19 L (5 gal) to 208 L (55 gal) Drum
Contaminated Equipment	ICDF ^b	To Be Determined
Miscellaneous	CFA Landfill	Bags

a. The final packaging configuration will be coordinated with WGS personnel.

b. The ICDF is the primary disposal site; however, as per the ROD (DOE-ID 2000a), another location within the INEEL may be selected for permanent disposal.

Table L-5. ARA-23 Waste Stream Summary.

Waste Type	Anticipated Volume	Waste Classification	Waste Code
Project Site-Specific Waste			
Soils	35,538 m ³ (46,482 yd ³)	Low-level Radioactive	—
PPE	30.6 m ³ (40 yd ³)	Low-level Radioactive	—
Plastic Sheeting	30.6 m ³ (40 yd ³)	Low-level Radioactive	—
Other Potential Waste			
Unused/Unaltered Samples	< 0.57 m ³ (0.74 yd ³)	Low-level Radioactive	—
Analytical Residues	< 0.57 m ³ (0.74 yd ³)	Low-level Radioactive	—
Clean Sample Containers	< 0.57 m ³ (0.74 yd ³)	Conditional Industrial	—
Hydraulic Spills	< 15.3 m ³ (20 yd ³)	Conditional Industrial	—
Contaminated Equipment	No estimate	Low-level Radioactive	—
Miscellaneous	< 15.3 m ³ (20 yd ³)	Conditional Industrial	—

Table L-6. ARA-23 Waste Stream Disposition.

Waste Type	Disposition	Packaging ^a
Project Site-Specific Waste		
Soils	ICDF ^b	Dump trucks
PPE	ICDF ^b	Bags
Plastic Sheeting	ICDF ^b	Bags
Other Potential Waste		
Unused/Unaltered Samples	ICDF ^b	19 L (5 gal) Drum
Analytical Residues	ICDF ^b	19 L (5 gal) Drum
Clean Sample Containers	CFA Landfill	19 L (5 gal) Drum
Hydraulic Spills	CFA Landfill	19 L (5 gal) to 208 L (55 gal) Drum
Contaminated Equipment	ICDF ^b	To Be Determined
Miscellaneous	CFA Landfill	Bags

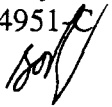
a. The final packaging configuration will be coordinated with WGS personnel.

b. The ICDF is the primary disposal site; however, as per the ROD (DOE-ID 2000a), another location within the INEEL may be selected for permanent disposal.

Appendix M

Cost Estimate

COST ESTIMATE SUPPORT DATA RECAPITULATION

Project Title: WAG 5/OU 5-12/COMPREHENSIVE CLEAN UP/PHASE II/REMEDIAL
DESIGN/REMEDIAL ACTION
Estimator: J. D. Folker
Date: August 31, 2000
Estimate Type: Project Support
File: 4951-C
Approved By: 

I. **SCOPE OF WORK:** *Brief description of the proposed project.*

This scope of work contains documentation development, remedial design and remedial action for Phase II of the Waste Area Group 5, Operating Unit 5-12 (WAG 5, OU 5-12) cleanup. The OU 5-12 Record of Decision (ROD) identified four contaminated soil sites that had unacceptable risks to human health or the environment. These contaminated soil sites are designated as ARA-01, ARA-12 and ARA-23. The human health risk associated with ARA-01, ARA-12, and ARA-23 is primarily external exposure to ionizing radiation. Adverse effects to ecological receptors are associated with ARA-01 and ARA-12.

The documentation and activities covered in this scope include the Phase II RD/RA Work Plan. This Work Plan, designated as an FFA/CO primary document, will be developed for the Phase II contaminated soil sites work. The Phase II RD/RA Work Plan will include:

- A. A detailed drawings and specifications for Phase II
- B. Compliance with ARARs
- C. Packaging, shipping and transportation plan (as required)
- D. A Health and Safety Plan and Preliminary Hazard Assessment
- E. A Field Sampling Plan
- F. Waste Management Plan
- G. Detailed Phase II cost estimate
- H. Identification of primary/secondary documents and submittal dates
- I. Phase II remedial action schedule
- J. O&M Plan (containing the IC Plan)

As part of the design needs, some limited characterization will be performed at the contaminated soil sites to identify any potential soil volume reductions and to develop hazardous waste determinations. The documents that will be completed as part of this design sampling are: an FSP, laboratory TOSs, L&V reports, hazardous waste determinations and an EDF identifying any potential to minimize soil volume.

COST ESTIMATE SUPPORT DATA RECAPITULATION

- Continued -

Project Title: WAG 5/OU 5-12/COMPREHENSIVE CLEAN UP/PHASE II/REMEDIAL
DESIGN/REMEDIAL ACTION

File: 4951-C

Page 2 of 5

As part of the comprehensive action, institutional controls will be implemented at nine of the 55 WAG 5 sites, because residual contamination precludes unrestricted land use. These sites are:

- A. ARA-03 ARA-I Lead Sheetting Pad Near ARA-627
- B. ARA-06 ARA-II Stationary Low-Power Reactor No. 1 Burial Ground
- C. ARA-24 ARA-III Radiologically Contaminated Soil
- D. PBF-10 PBF Reactor Area Evaporation Pond (PBF-733)
- E. PBF-12 PBF SPERT-I Leach Pond
- F. PBF-13 PBF Reactor Area Rubble Pit
- G. PBF-21 PBF SPERT-III Large Leach Pond
- H. PBF-22 PBF SPERT-IV Leach Pond (PBF-758)
- I. PBF-26 PBF SPERT-IV Lake

During the Phase II remedial design, an Institutional Control Status Report will be developed identifying the current state of institutional controls at the nine sites listed above, as well as the Phase I and Phase II sites. The status report will be transmitted to the agencies within 6-months of ROD signature.

An Institutional Control Plan will be developed as part of the O&M Plan to ensure institutional controls are implemented to be in effect over the next 100 years. The O&M Plan will be an attachment to the Phase II Work Plan.

II. **BASIS OF THE ESTIMATE:** *Drawings, Design Report, Engineers Notes and/or other documentation upon which the estimate is originated.*

- A. Request for cost estimating services from C.H. dated July 20, 2000.
- B. OU 5-12 Comprehensive Clean Up Logic Diagram.
- C. WAG 5 FS Cost Estimate Alternative 4A File No. 4951-4.
- D. WBS C.1.01.05.02.AB.01 Resource Summary Report run date 09/09/1999.
- E. OU 5-12 Phase II Remedial Design Work Package Scope of Work.
- F. WAG 5 RD/RA Phase II Construction Specification.
- G. WAG 5 OU 5-12 Phase II RA Analytical Sample Summary.
- H. WAG 5 OU 5-12 Phase II Title II Drawings T-1, T-2, C-1 through C-10.
- I. Tipping fee at the Idaho CERCLA Disposal Facility (ICDF) has not been included in this estimate.
- J. WAG 5 (OU 5-12) Contaminated Soil Volume Estimated Chart (Phase II) by Weck Liu, PE, August 29, 2000.

COST ESTIMATE SUPPORT DATA RECAPITULATION

- Continued -

Project Title: WAG 5/OU 5-12/COMPREHENSIVE CLEAN UP/PHASE II/REMEDIAL
DESIGN/REMEDIAL ACTION

File: 4951-C

Page 3 of 5

- K. The haul distance from the ARA-I soil sites to the ICDF is 11.2 miles and the haul distance from the ARA-III soil sites to the ICDF is 10.2 miles.
- L. For excavate, load, and haul calculations, a 50-minute hour was used.
- M. Caterpillar performance Handbook, Edition 26.
- N. Meeting with F. Webber, C. Hiaring, R. Wells, and D. Preussner on August 17, 2000.
- O. R.S. Means, Facilities Construction Cost Data, 14th edition.
- P. Rental Rate Blue Book, Vol. 1.

III. **ASSUMPTIONS:** *Conditions statements accepted or supposed true without proof of demonstration. An assumption has a direct impact on total estimated cost*

- A. The RD/RA design assumes that soil contaminated with concentrations in excess of the remediation goals will be removed using conventional earth-moving equipment. All excavations will be contoured to match the surrounding terrain and vegetated.
- B. Remedial action site work will be fixed price competitively bid and performed by a general contractor.
- C. The construction subcontract for the remedial action site work will be awarded in 2004.
- D. Construction labor rates are based on the prevailing wage rates as determined by the INEEL Site Stabilization Agreement. The labor values presented are based on handbook values that have been adjusted to INEEL practices and productivity factors.
- E. Costs for overtime, holidays, and/or shift work have not been included.
- F. All archeological surveys have been completed and any mitigation will be part of the remedial action work package.
- G. Contamination at the ARA-23 site is limited to the top 6-inches.
- H. Some limited characterization will be performed to minimize soil volume that will need to be excavated.
- I. The passive institutional controls will need to be designed to be effective for at least 100 years.
- J. Existing institutional controls will be adequate until the selected remedy has been implemented at the five contaminated soil sites.
- K. The construction subcontract for the remedial action site work will be awarded in 2004.
- L. Because of contractor conduct of maintenance/conduct of operations, overhead of 25% of subcontractor directs has been included in the estimate. Profit of 10% of subcontractor directs has been included in the estimate.
- M. Small tools and supplies of 3% of subcontractor labor have been included in the estimate.

COST ESTIMATE SUPPORT DATA RECAPITULATION

- Continued -

Project Title: WAG 5/OU 5-12/COMPREHENSIVE CLEAN UP/PHASE II/REMEDIAL
DESIGN/REMEDIAL ACTION

File: 4951-C

Page 4 of 5

- N. Initial excavations of 3 inches will be accomplished at ARA -01, ARA-12, and ARA-23 (other areas, area A & C stockpiles, asphalt area, and spot excavation areas). Initial excavations of 6 inches will be accomplished at ARA-23 (I, II, Haul Road), and inside SL-1. Further (second) excavation of 9, 8 inches will be accomplished at ARA-01, ARA-12 and ARA-23 (II), respectively. Further excavation of 6 inches will be accomplished at ARA-23 (asphalt area) and inside SL-1. Further excavation of 30 inches will be accomplished at ARA-23 (haul road), and further excavation of 3 inches will be accomplished at ARA-23 (other areas and spot excavation).
- O. For excavation of large areas, a Cat 14 grader with a production rate of 880 ft²/min. was used.
- P. For further (second) excavation, takeoff quantities are 50% more than bid quantities because of inconsistencies in grade.
- Q. Including mobilization and demobilization, there will be nine crew transfers at five hours each.
- R. Since 12 yd³ rear end dump trucks will not be heaped, each load will be 10 yd³ (loose yd³) and covered.
- S. Brush cutter production is 880 ft²/min.
- T. For asphalt, SL-1 and spot excavations, a Cat 320 excavator was used.
- U. Load, haul and return time (total cycle time) was calculated to be 72.4 minutes, or 1.45 hours (based on 50-minute hour). Components of this calculation include: total load time=2 minutes; total turn and dump time=1 minute; total spot and delay time = 0.2 minutes; survey tires at ARA and ICDF = 30 minutes (2-15 minute surveys); average paved road haul speed, accounting for stop signs, acceleration and deceleration=35 miles/hour; average paved road return speed, accounting for stop signs, acceleration and deceleration=45 miles/hour.
- V. All soils and contamination-derived waste will be disposed of at the ICDF. It is anticipated that no tipping fee will be incurred for this disposal.

IV. **CONTINGENCY GUIDELINE IMPLEMENTATION:** *The percentage used for contingency as determined by the contingency allowance guidelines can be altered to reflect the type of construction and conditions that may impact the total estimated cost.*

The contingency included in this estimate is 31% and is within the guidelines for this level of estimate. The Remedial Action has a relatively high amount of risk with respect to possible depths of contamination. In addition, haul time could be adversely affected by increased truck surveillance time.

COST ESTIMATE SUPPORT DATA RECAPITULATION

- Continued -

Project Title: WAG 5/OU 5-12/COMPREHENSIVE CLEAN UP/PHASE II/REMEDIAL
DESIGN/REMEDIAL ACTION

File: 4951-C

Page 5 of 5

V. **OTHER COMMENTS/CONCERNS SPECIFIC TO THE ESTIMATE**

- A. Costs from the Detailed Cost Estimate sheets are direct costs for labor. Costs for corresponding divisions on the Cost Estimate Summary sheet include all applicable indirect costs (overhead, profit, commission on subcontracts, sales tax and bond).
- B. Bechtel BWXT Idaho, LLC labor rates are average current rates, by organization.
- C. For this type of work, in which quantities of excavated dirt are unknown, it is recommended that a unit price contract be awarded.

TEC Summary Report 1

Project Name: **WAG 5/OU 5-12/Phase 2/Remedial Design/Remedial Action**
 Project Location: **Auxiliary Reactor Area (ARA), Power Burst Facility (PBF), INEEL**
 Project Number: **4951-C**

<u>ESTIMATE ELEMENT</u>	<u>Estimate Subtotal</u>	<u>Escalation</u> 8.68%	<u>Contingency</u> 30.81%	<u>TOTAL</u>
Total Estimated Cost (TEC)	\$3,056,467	\$265,197	\$1,023,409	\$4,345,073
Total Estimated Cost (TEC)	\$3,056,467	\$265,197	\$1,023,409	\$4,345,073
Rounded TEC (Rounded to the nearest \$ 10000)				\$4,350,000

M-6

Type of Estimate: <u>Project Support</u> Estimator: <u>J. D. Folker</u> Checked By: <u>[Signature]</u> Approved By: <u>[Signature]</u>	Remarks
---	---------

BWXT

Project Name:

WAG 5/OU 5-12/Phase 2/Remedial Design/Remedial Action

Project Location: Auxiliary Reactor Area (ARA), Power Burst Facility (PBF), INEEL

Estimate Number: 4951-C

Project Summary Report

Client: C. H. Haring
Prepared By: J. D. Folker
Estimate Type: Project Support

LEVEL	Estimate Subtotal	Escalation	Contingency	Contingency %	TOTAL
ER 12.10 REMEDIAL DESIGN	\$610,125	\$0	\$183,037	30.00%	\$793,162
ER 12.20 REMEDIATION SUPPORT	\$7,817	\$0	\$2,345	30.00%	\$10,162
ER 12.21 REMEDIATION/TECHNICAL SUPPORT ACTIVITIES	\$82,917	\$0	\$24,875	30.00%	\$107,792
ER 12.30 REMEDIAL ACTION	\$2,193,527	\$265,197	\$764,527	31.09%	\$3,223,252
ER 12.30.01 --MOBILIZATION AND PREPARATORY WORK	\$70,282	\$8,497	\$50,544	64.16%	\$129,323
ER 12.30.01.0 ---Mobilization and Preparatory Work	\$63,615	\$7,691	\$48,302	67.74%	\$119,607
ER 12.30.01.0.1.0 -----Mobilization of Construction Equipment and Facilities	\$63,615	\$7,691	\$48,302	67.74%	\$119,607
ER 12.30.01.0 ---Preconstruction Submittals/Implementation Plans	\$6,667	\$806	\$2,242	30.00%	\$9,715
ER 12.30.01.0.3.0 -----Develop Work Control Requirements	\$3,050	\$369	\$1,026	30.00%	\$4,445
ER 12.30.01.0.3.0 -----Prepare Work Control Package	\$1,525	\$184	\$513	30.00%	\$2,222
ER 12.30.01.0.3.0 -----Health and Safety Review of Work Control Package	\$567	\$69	\$191	30.00%	\$826
ER 12.30.01.0.3.0 -----Incorporate Comments on WCP	\$763	\$92	\$256	30.00%	\$1,111
ER 12.30.01.0.3.0 -----Facility Review of Work Control Package	\$763	\$92	\$256	30.00%	\$1,111
ER 12.30.02 --Monitoring, Sampling, Testing and Analysis	\$242,664	\$29,338	\$81,601	30.00%	\$353,603
ER 12.30.02.0 ---Laboratory Chemical Analysis	\$242,664	\$29,338	\$81,601	30.00%	\$353,603
ER 12.10.24.40 -----Mobilize and Sample	\$28,991	\$3,505	\$9,749	30.00%	\$42,245
ER 12.10.24.45 -----In-Situ Analysis	\$124,379	\$15,037	\$41,825	30.00%	\$181,241
ER 12.10.24.50 -----Laboratory Analysis	\$26,448	\$3,198	\$8,894	30.00%	\$38,539
ER 12.10.24.53 -----Data Validation	\$34,482	\$4,169	\$11,595	30.00%	\$50,247
ER 12.10.24.54 -----Demobilization	\$12,481	\$1,509	\$4,197	30.00%	\$18,187
ER 12.10.24.55 -----Prepare Hazardous Waste Determination	\$15,883	\$1,920	\$5,341	30.00%	\$23,144

BWXT

08/31/2000 11:12:14

Success Estimating and Cost Management System

Page No. 1

Project Name:

WAG 5/OU 5-12/Phase 2/Remedial Design/Remedial Action

Project Location: Auxiliary Reactor Area (ARA), Power Burst Facility (PBF), INEEL

Estimate Number: 4951-C

Project Summary Report

Client:

C. H. Haring

Prepared By:

J. D. Folker

Estimate Type: Project Support

LEVEL	Estimate Subtotal	Escalation	Contingency	Contingency %	TOTAL
ER 12.30.03 --SITE WORK	\$1,830,535	\$221,312	\$615,554	30.00%	\$2,667,400
ER 12.30.03.0 ---Earthwork	\$1,830,535	\$221,312	\$615,554	30.00%	\$2,667,400
ER 12.30.03.03.0 -----ARA-01	\$47,800	\$5,779	\$16,074	30.00%	\$69,653
ER 12.30.03.03.0 -----ARA-12	\$86,119	\$10,412	\$28,959	30.00%	\$125,490
ER 12.30.03.03.0 -----ARA-23	\$1,471,314	\$177,882	\$494,759	30.00%	\$2,143,954
ER 12.30.03.03.0 -----SL-1	\$16,812	\$2,033	\$5,653	30.00%	\$24,498
ER 12.30.03.03.0 -----Area A & C Stock Pile	\$28,601	\$3,458	\$9,618	30.00%	\$41,677
ER 12.30.03.03.0 -----Reseeding All Areas	\$179,889	\$21,749	\$60,491	30.00%	\$262,129
ER 12.30.22 --CLOSURE DOCUMENTATION	\$50,046	\$6,051	\$16,829	30.00%	\$72,926
ER 12.30.22.0 ---Prepare Final Inspection Report	\$11,296	\$1,366	\$3,798	30.00%	\$16,460
ER 12.30.22.0 ---Resolve Agency Comments Prefinal Inspection	\$8,137	\$984	\$2,736	30.00%	\$11,857
ER 12.30.22.0 ---Prepare Phase II RA Report	\$17,384	\$2,102	\$5,846	30.00%	\$25,332
ER 12.30.22.0 ---IRC Review Phase II RA Report	\$2,849	\$344	\$958	30.00%	\$4,152
ER 12.30.22.0 ---Incorporate IRC Comments Phase II Report	\$4,835	\$585	\$1,626	30.00%	\$7,045
ER 12.30.22.0 ---Incorporate Agency Comments Phase II RA Report	\$5,545	\$670	\$1,865	30.00%	\$8,081
ER 12.40 CLEANUP TECHNICAL ADMINISTRATIVE ACTIVITIES	\$123,526	\$0	\$37,058	30.00%	\$160,584
ER 1240.02 --Project Execution	\$112,790	\$0	\$33,837	30.00%	\$146,627
ER 1240.02.0 ---Field Oversight/Support	\$112,790	\$0	\$33,837	30.00%	\$146,627
ER 1240.03 --Baseline Management	\$10,736	\$0	\$3,221	30.00%	\$13,957
GAPIF Non-Org G&A and PIF	\$38,555	\$0	\$11,567	30.00%	\$50,122

BWXT

08/31/2000

11:12:14

Success Estimating and Cost Management System

Page No.

2

Project Summary Report

Project Name: **WAG 5/OU 5-12/Phase 2/Remedial Design/Remedial Action**
Project Location: **Auxiliary Reactor Area (ARA), Power Burst Facility (PBF), INEEL**
Estimate Number: **4951-C**

Client: **C. H. Haring**
Prepared By: **J. D. Folker**
Estimate Type: **Project Support**

<u>LEVEL</u>	<u>Estimate Subtotal</u>	<u>Escalation</u>	<u>Contingency</u>	<u>Contingency %</u>	<u>TOTAL</u>
Total WAG 5/OU 5-12/Comprehensive Clean Up/Phase II	\$3,056,467	\$265,197	\$1,023,409	30.81%	\$4,345,073

BWXT

08/31/2000 11:12:14

Success Estimating and Cost Management System

Page No. 3

Appendix N
Environmental Checklist

ENVIRONMENTAL CHECKLIST

EC Document No. PBF-00-002

DIRECTIONS: The Responsible Manager should complete Sections A through D. The Contractor's Policy and Permitting Organization completes Sections E & F. Refer to MCP-3480 "Environmental Instructions for Facilities, Processes, Materials, and Equipment," Appendix A for instructions to complete this form.

SECTION A. Descriptive Information:

Charge Number:	3XBC31704		
Project Title:	WAG 5 Comprehensive Remedial Action		
DOE-HQ Program:	EM-40	Project No.:	
Performing Organization:	BBWI WAG-5-31B0	Date:	3/01/2000
Contact	Name	Telephone No.	E-Mail
DOE Project Technical Manager:	A. Hathaway	526-4049	HATHAWCA
Facility Operations Manager:	G. W. Braun	526-2729	BRN
Program/Project Manager:	F. L. Webber	526-8507	FLW
Project/Technical Contact:	C. M. Hiaring	526-2719	HRG
Alternative Project/Technical Contact:	D. H. Preussner	526-9813	DPRES
Environmental Field Support Contact	K. M. Davis	526-4949	DAVIKM

SECTION B. Project Description: Attach a complete and concise description of the project or activity. Including type of activity (e.g., new construction, process modification, maintenance, research and development, or work for others), location (e.g., area, building, laboratory), purpose and need, project start and end dates, approximate cost.

SECTION C. Environmental Aspects / Potential Sources of Impact: Would the action involve, generate, or result in changes to any of the following? (If Yes, on attachment provide specific potential impact information such as types and amounts of chemicals, waste, effluent, or emissions; size of modification, soil disturbance; or type of tank, equipment, process, or pollution prevention measures).

Source	Yes	No	Source	Yes	No
1. Air Pollutants	X		11. Industrial Waste Generation	X	
2. Asbestos Emissions		X	12. Interaction with Wildlife/Habitat	X	
3. Biological Hazards		X	13. Managing Surplus Property and Materials		X
4. Chemical Use and Storage	X		14. PCB Contamination		X
5. Contaminated Sites Disturbance	X		15. Radioactive Waste Generation	X	
6. Cultural/Historical Resource Disturbance	X		16. Storing Hazardous Materials or Waste in Tanks		X
7. Discharge to Wastewater Systems or Groundwater		X	17. Surface Water Contamination		X
8. Drinking Water Contamination		X	18. Use of Natural Resources		X
9. Hazardous/Mixed Waste Generation		X	19. Work within a Flood Plain		X
10. Hazardous/Radioactive Material or Waste Handling and Trans.	X		20. Other:		X

SECTION D. Work Activities: Select specific work activities using Appendix B in MCP-3480 and check appropriate section numbers on the Work Activity Work Sheet (see next page). Check and do one of the following:

<input checked="" type="checkbox"/> If required to submit EC by MCP-3480, Appendix B, do not complete Sections E & F or Signature Block. Submit EC to Air / Water / NEPA / Environmental Programs Policy and Permitting Department, John S. Irving (MS 3428) or E-Mail (JSI4) for review and approval.
<input type="checkbox"/> If not required to submit EC by MCP-3480, Appendix B, complete Section F (check either "Existing EC" or "Does not require an approved EC"), sign & date (in Signature Block), and place copy of EC in project files.

SECTION E. Instructions and Conditions: (If Yes, see attachment for instructions.)	Yes	No
1. Instructions from MCP-3480?	X	
2. Conditions Required Before Starting Project?		X

SECTION F. NEPA Level of Documentation and Reference(s).

CX:	EA:	EIS:	CERCLA:	<input checked="" type="checkbox"/>	Previously approved NEPA document, including existing environmental checklist (provide # below):	Does not require EC approved by Environmental Affairs (e.g., routine maintenance, operational activities):	<input type="checkbox"/>
-----	-----	------	---------	-------------------------------------	--	--	--------------------------

Reference(s): In accordance with the June 1994 Secretarial Policy on the National Environmental Policy Act, the Department of Energy will rely on the CERCLA process for review of actions to be taken under CERCLA

Note: For projects checked above as "CX" (Categorical Exclusion) the proposed action must not: 1) threaten a violation of applicable statutory, regulatory, or permit requirements for environmental, safety, and health, including requirements of DOE orders; 2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities; 3) disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that pre-exist in the environment such that there would be uncontrolled or unpermitted releases; 4) adversely affect environmentally sensitive resources. In addition, no extraordinary circumstances related to the proposal exist which would affect the significance of the action, and the action is not "connected" nor "related" (40 CFR 1508.25(a)(1) and (2), respectively) to other actions with potentially or cumulatively significant impacts.

Note: The above paragraph does not apply to EA, EIS, or CERCLA related activities.

SIGNATURE BLOCK.

Name: Reed S. Moser

Telephone No.: 526-7811

Signature:



Date: 10/05/00

The Environmental Instructions in this EC are effective for one year from the date in the Signature Block (page 1) or unless otherwise notified by EA. There is no expiration date for the Categorical Exclusion listed in Section F unless noted.

ENVIRONMENTAL CHECKLIST

EC Document No. PBF-00-002

Asbestos

- ☐ 4.2 Training Personnel to Handle Asbestos
☐ 4.3 Performing Activities That May Disturb or Block Access to Asbestos
☐ 4.4 Removing Asbestos

Chemicals

- ☒ 4.5 Purchasing Chemicals
☒ 4.6 Using & Storing Chemicals
☐ 4.7 Constructing or Modifying Container Storage Facilities
☐ 4.8 Operating Container Storage Facilities
☐ 4.9 Working in a CERCLA Area or Contamination
Drinking Water
☐ 4.10 Constructing or Modifying Drinking Water Systems
☐ 4.11 Operating Drinking Water Systems
☐ 4.12 Sampling Drinking Water Systems
☐ 4.13 Maintaining & Repairing Drinking Water Systems
☐ 4.14 Removing a Drinking Water Pump
☐ 4.15 Exceeding Permitted or Regulatory Limits-Drinking Water

- Facility, Equipment, &/or Process**
☐ 4.16 Constructing or Modifying Facilities, Equipment, or Processes
☐ 4.17 Maintaining & Repairing Facilities, Equipment or Processes
☐ 4.18 Manufacturing Wood Furniture & Wood Furniture Components
☐ 4.19 Maintaining Equipment Containing, or Contaminated with PCBs
☐ 4.20 Decontaminating Equipment Containing, or Contaminated with PCBs
☐ 4.21 Performing Building or Facility Assessment Before Preparing them for Transfer to Surplus or Inactive Facility Status
☐ 4.22 Emptying Buildings or Facilities before Transferring Them to Surplus or Inactive Facility Status
☐ 4.23 Deactivating, Decontaminating, Dismantling, or Closing Facilities, Equipment & Processes

- Facility, Equipment, &/or Processes that Emit Air Pollutants**
☐ 4.24 Constructing or Modifying Airborne Emission Sources
☒ 4.25 Operating Facilities & Equipment That Emit Airborne Pollutants
☒ 4.26 Performing Activities With the Potential for Fugitive Dust or Fugitive Emissions
☐ 4.27 Conducting Open Burning
☐ 4.28 Burning Fuels
☐ 4.29 Exceeding Permitted or Regulatory Limits - Air Fuels (Petroleum)

- ☐ 4.30 Maintaining & Repairing Motor Vehicle Gasoline Station Pumps
Halon & Appliances Containing Halon
☐ 4.31 Maintaining, Testing, & Disposing or Halon-Containing Equipment

Inspections

- ☐ 4.32 Responding to Regulatory Inspections
Laboratory Services
☒ 4.33 Procuring Laboratory Services For Waste Characterization

Ozone Depleting Substances (ODS), Refrigerants or Appliances Containing Refrigerants

- ☐ 4.34 Purchasing ODS (i.e., Refrigerants, Halon, & Other ODS) Equipment or Recovery/Recycling Equipment
☐ 4.35 Training Technicians to Handle Refrigerants
☐ 4.36 Maintaining, Servicing, or Repairing Refrigeration & Air Conditioning Equipment
☐ 4.37 Recycling Refrigerants from Motor Vehicle Air Conditioners
☐ 4.38 Distributing, Excessing, or Disposing of Appliances Containing Refrigerants

Pesticides & Fertilizers

- ☐ 4.39 Procuring, Applying & Storing Pesticides
☐ 4.40 Apply Fertilizers
☐ 4.41 Leasing, Renting, or Transacting Real Property

Research & Development

- ☐ 4.42 Conducting New or Modifying Existing Research & Development Activities
Routine Activities
☐ 4.43 Routine Administrative Activities
☐ 4.44 Routine Maintenance Activities

Septic Tanks

- ☐ 4.43 Constructing or Modifying Septic Tanks/System
☐ 4.44 Discharging to Septic Tanks/System
☐ 4.45 Maintaining & Repairing Sept Tanks/System
☐ 4.46 Pumping Septic Tanks
☐ 4.47 Abandoning or Closing Septic Tanks
Soils - Disturbing Soil or Altering Stream Channels
☒ 4.48 Disturbing Soils or Altering Stream Channels
Spills, Releases, & Fire-Related Incidents
☐ 4.49 Reporting & Cleaning Up Spills & Releases (Non-PCB)

- ☐ 4.49 Oil Spills That Cannot be Cleaned Up Within 24 Hrs.
☐ 4.50 Reporting PCB Spills & Releases & Fire-Related Incidents Involving PCBs
☐ 4.51 Cleaning Up Spills & releases of PCBs
☐ 4.52 Leaking Equipment Containing or Contaminated With PCBs

Stormwater - Activities That Impact Storm Waters at the INEEL Site

- ☐ 4.53 Managing Storm Waters at Construction & D&D Sites
☐ 4.54 Managing Storm Waters at Industrial Sites
Tanks - Above Ground & Underground Tanks
☐ 4.55 Constructing or Modifying Above Ground Storage Tanks
☐ 4.56 Operating Above Ground Storage Tanks
☐ 4.57 Repairing Above Ground Storage Tanks
☐ 4.58 Changing Use or Reactivating Above Ground Storage Tanks

- ☐ 4.59 Discontinuing Use Of, Or Closing, Relocating, Or Removing Above Ground Storage Tanks & Non-Regulated Underground Storage Tanks
☐ 4.60 Constructing or Modifying UST Systems
☐ 4.61 Operating & Maintaining Underground Storage Tanks (USTs)

Releases, Leaks, Spills, or Unusual Operating Conditions From USTs

- ☐ 4.62 Repairing USTs
☐ 4.63 Releases, Leaks, Spills, or Unusual Operating Conditions From USTs
☐ 4.64 Changing Use or Reactivating USTs
☐ 4.65 Temporarily Discontinuing Use Of, Or Temporarily Closing UST

- ☐ 4.66 Discontinuing Use Of, Or Closing, Relocating, or Removing USTs Permanently
☐ 4.67 Operating Volatile Organic Storage Tanks
☐ 4.68 Operating Portable Oil Storage Facilities

Waste Facilities

- ☐ 4.69 Operating Solid Waste Management Units
Wastes
☐ 4.70 Procuring Off-Site Waste Management & Recycling Services

- ☐ 4.71 Dispositioning Excess Materials
☒ 4.72 Planning To Generate Wastes
☒ 4.73 Generating Waste

Waste Water - City Of Idaho falls

- ☐ 4.74 Constructing or Modifying Sewage & Other Wastewater Systems
☐ 4.75 Discharging New Wastewaters or Changing Discharges to the City of Idaho Falls Sewer Systems
☐ 4.76 Identifying Chemical Streams for Discharge to the City of Idaho Falls Sewer System
☐ 4.77 Monitoring Wastewaters to the City of Idaho Falls Sewer System
☐ 4.78 Exceeding Wastewater Discharge Limits to the City of Idaho Falls Sewer System

Wastewater - INEEL Site

- ☐ 4.74 Constructing or Modifying Sewage & Other Wastewater Systems
☐ 4.79 Discharging New Wastewaters at the INEEL Site
☐ 4.80 Discharging Wastewaters at the INEEL Site
☐ 4.81 Discharging Wastewaters to Wastewater Land Application Facilities

- ☐ 4.82 Operating Wastewater Land Application Facilities
Water Use & Consumption
☐ 4.83 Reporting Water Consumption

Wells - Water Wells, Injection Wells, Well Protection

- ☐ 4.84 Constructing or Modifying Water Wells
☐ 4.85 Protecting Wellheads
☐ 4.86 Closing & Abandoning Wells
☐ 4.87 Constructing or Modifying Injection Wells
☐ 4.88 Operating & Sampling Permitted Injection Wells
☐ 4.89 Maintaining Permitted Injection Wells
☐ 4.90 Discharging to Shallow Injection Wells Not Requiring a Permit
☐ 4.91 Abandoning Injection Well

Environmental Checklist Attachments

Section B. Project Description (continued): Attach a complete and concise description of the project or action. Including type of action (e.g., new construction, process modification, maintenance, new activity, research and development, or work for others), purpose and need, pollution prevention and waste minimization measures, projected start and end dates, and approximate cost.

The proposed action would implement selected remedies documented in the Waste Area Group (WAG)-5 Record of Decision (ROD) to mitigate the risk associated with specific sites at the Idaho National Engineering and Environmental Laboratory (INEEL). The proposed activities would be a remedial action under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Management of stored and investigation-derived waste and groundwater monitoring are also components of the proposed action. The initial sites to be remediated are designated as Auxiliary Reactor Area (ARA)-01, ARA-12, and ARA-23. Contaminated soil is the only source medium for the individual sites. Institutional controls (i.e., safety signs, barriers, etc.) would also be implemented as a limited action at ARA-02, ARA-03, ARA-06, ARA-16, ARA-24, ARA-25, Power Burst Facility (PBF)-10, PBF-12, PBF-13, PBF-21, PBF-22, and PBF-26.

The remediation of the soil sites would include the following activities:

Soil contaminated with concentrations in excess of the remediation goals would be removed using conventional earth moving equipment (e.g., scrapers and backhoes). Areas that have been excavated to depths greater than 1 ft would be backfilled with uncontaminated soil or sloped to promote drainage. All excavations would be contoured to match the surrounding terrain and vegetation. Contaminated soil would be characterized and sent to the INEEL CERCLA Disposal Facility (ICDF) or another location within the INEEL for permanent disposal. Hazardous and mixed waste would not be generated as a result of remediation efforts.

Project Start Date: 10/01/01. The remediation effort would be completed by FY-06.

Cost Estimate: \$10M

Section C. Environmental Aspects (continued): (If you answered Yes to any Section C Items, label with Section C Item Number and explain below)

1. Air Pollutants – Air emissions (fugitive dust and vehicle exhaust) would be generated when using conventional earth-moving equipment (i.e., scrapers and backhoes) to excavate contaminated soils. Excavating and contouring activities at ARA-01, -12, and -23, could generate fugitive dust. Air emissions would be controlled by the use of water sprays or soil fixatives to suppress dust during excavation and removal. Current radiological control practices would be implemented to minimize radiation exposures to the operators. Radiological controls could consist of limiting the amount of time an operator can work in the area, requiring personnel to wear personal protective clothing, and using distance and shielding to reduce radiation exposure. Shipping containers would be positioned near the excavations so that loaders and backhoes can place the contaminated material directly into the specified containers. Mechanisms would be used to prevent accidental release during transit such as tarps that may be unrolled over a truck box and secured. The waste would then be transported to the locations specified in the OU 5-12 ROD. An Air Permitting Applicability Determination (APAD) has been completed and approved (see attachment). All toxic pollutant emissions must be estimated per IDAPA 58.01.01.585-586. Note Section G of the attached APAD.

4. Chemical Use and Storage – Isopropanol may be used for decontamination of the excavation equipment. Prior to purchasing any chemicals for this project, the Material Exchange Program (MEP) would be contacted to determine if the necessary chemicals are already available. Non-hazardous chemical substitutes would be used in the place of hazardous chemicals as long as the non-hazardous substitutes meet the requirements/specifications of the requester. Upon project completion, any unused chemicals would be made available to the MEP.

5. Contaminated Site Disturbance – Project activities would be performed within the boundaries of three specific CERCLA sites (i.e., ARA-01, ARA-12, and ARA-23). In addition, the proposed action also addresses the ARA-02, ARA-03, ARA-06, ARA-16, ARA-24, ARA-25, PBF-10, PBF-12, PBF-13, PBF-21, PBF-22, and PBF-26 sites as described above in the project description. All samples generated from this project would originate from a CERCLA operable unit within Waste Area Group 5, Operable Unit 5-12 and therefore would be considered CERCLA wastes. In addition, any waste associated with the sampling would be CERCLA waste.

6. Cultural/Historical Resource Disturbance – A Cultural Resource Survey has been conducted for these sites. (*Draft Cultural Resource Investigations for Waste Area Group 5 on the Idaho National Engineering and Environmental Laboratory*, INEEL/EXT-2000-006, March 2000). All of the proposed activities have been surveyed for cultural resources. The proposed work should have no effect on significant cultural resources and archaeological clearance is recommended (see attached note, dated 8/17/2000).

10. Hazardous/Radioactive Material or Waste Handling and Transportation – Wastes would be handled and transported as specified in the ROD.

11. Industrial Waste Generation – Waste streams would be evaluated to determine if any of these materials can be recycled or reused. Reusable/laundryable personal protective equipment (PPE) would also be used where practicable.

12. Interaction with Wildlife/Habitat – The Environmental Science and Research Foundation (ESRF) has provided guidance for controlling noxious weeds in areas of soil disturbance. The Foundation recommends a weed management plan and a revegetation plan be prepared prior to any soil removal activities. The Foundation also recommends the size of the area disturbed be kept to as small as possible and all roads leading into the area be mowed instead of bladed. All sites should be reseeded to native species upon completion of the remedial action (see attachment, dated August 25, 2000).

15. Radioactive Waste Generation – There would be approximately 52,000 cubic yards of contaminated soil and rocks that would need to be remediated at ARA-I, II, and III. This contamination has resulted from the various activities at these three facilities during the 30+ years of operation. Excavated radioactive soils would be characterized and sent to the ICDP or another location within the INEEL for permanent disposal. The excavated areas would be backfilled, contoured to match the surrounding terrain, and vegetated. Some PPE may become contaminated and also require disposal.

Section E. Instructions and Conditions: (Select applicable Work Activity Instructions from MCP-3480 and/or include conditions required before starting project)

Instructions:

4.5 Purchasing Chemicals

Facility Manager:

- Assign chemical custodian(s) at each facility to track the purchase, storage, and disposition of chemicals used at the facility and to maintain Material Safety Data Sheets (MSDSs) for chemicals used at the facility.
- Contact EA to provide training for chemical custodians in the INEEL Chemical Management System (ICMS).

Responsible Manager:

- Before ordering any chemical, obtain and read the information contained in the MSDS and/or contact the appropriate ES&H representative (this is necessary because the MSDS is not always complete) to familiarize yourself with the hazards and the handling and storage requirements.
- If the MSDS is not available, contact the manufacturer or MSDS Systems personnel in Occupational Health to obtain a current MSDS for the specific chemical being requested.
- Determine if the chemical is available through the Material Exchange Program.
- Contact the MEP coordinator for help in determining whether the chemical meets the requester's specifications.

- If the chemical is not available through the MEP, submit the requisition to procurement.

Procurement:

- Submit the chemical requisition to EA for processing and approval.

Chemical Custodian:

- Enter and track, upon receipt of the chemical, all information required by the ICMS according to the instructions in MCP-2873, INEEL Chemical Management System.

NOTE: Any employee entering data into the ICMS must have current ICMS training.

Responsible Manager:

- Make copies of MSDSs available.

4.6 Using and Storing Chemicals

Facility Manager:

- Assign chemical custodian(s) at each facility to track purchase, storage, and disposition of chemicals used at the facility and to maintain Material Safety Data Sheets (MSDSs) for chemicals used at the facility.

Chemical Custodian: Track chemical purchase, use and disposition in the ICMS according to the instructions in MCP-2873, INEEL Chemical Management System

NOTE: Any employee entering data into the ICMS must have current ICMS training.

Responsible Manager:

- If a chemical is transferred from the original labeled container to another container, label the new container with same information contained on the original container and in accordance with hazard communication MCPs.
- Store the chemical according to the provisions of the MSDS and appropriate health & safety MCPs.
- Notify the chemical custodian of any chemicals that are no longer usable or needed for the original activity.

Chemical Custodian:

- Identify and determine with the facility Material Exchange Coordinator if chemicals that are no longer usable or needed for the original activity should be added to the MEP.
- If chemicals no longer usable or needed are not appropriate to list on the MEP, contact Waste Generator Services to dispose of the chemicals.

Responsible Manager:

- Contact Waste Generator Services for instructions for reuse or proper disposal of empty containers.

Chemical Custodian:

- Quarterly review and update, as necessary, the facility chemical inventory information, as requested by the ICMS System Administrator according to the instructions in MCP-2873, INEEL Chemical Management System.
- Obtain responsible manager approval of facility ICMS chemical inventory information.

Responsible Manager:

- Submit a signed letter to EA Air/Water/NEPA Policy & Permitting Manager and the ICMS System Administrator verifying that the facility ICMS chemical inventory information is accurate.
- Review and update, as necessary, the facility information for chemical storage tanks (any storage unit that is >110 gallons in volume) every two years, and submit the data to the INEEL Tank Compliance Program for review and use on the biennial INEEL Tank Inventory update review.

INEEL Tank Compliance Program:

- Update the INEEL Tank Inventory, as necessary.

4.9 Working in a CERCLA Area of Contamination

Responsible Manager:

- If work in an area contaminated with radiological, chemical, or other constituents might disturb the area, or if the area is a CERCLA area of contamination, implement MCP-3448, Reporting or Disturbance of Suspected Inactive Waste Sites.

4.25 Operating Facilities and Equipment That Emit Airborne Pollutants

Responsible Manager:

- Comply with all requirements applicable to air emissions sources identified in the Air Permit Applicability Determination.

Responsible Manager:

- Certify as accurate all air emissions information, including requests and reports that are to be submitted to the state of Idaho according to the instructions in MCP-9109.
- Perform the following for sources that emit radionuclides.
 - Determine the calendar year emissions for each radionuclide emissions from each source (i.e., fugitive emission area).
 - Provide the annual emissions data to EA Air/Water/NEPA Policy & Permitting by February 28 for the previous calendar year.
 - Contact EA Air/Water/NEPA Policy & Permitting Manager for guidance to develop compliance methodologies, as needed.
 - Prepare and submit for approval to EA a Quality Assurance Project Plan (QAPjP) for each radionuclide source that requires continuous monitoring according to the instructions in MCP-561, Quality Program Plan/Quality Assurance Project Plan.
 - Contact EA Air/Water/NEPA Policy & Permitting Manager for guidance.
 - Continuously monitor radionuclide air emissions at all release points that have uncontrolled radionuclide emissions in excess of a dose equivalent of 0.10 mrem/yr to the off-Site public.
 - Monitor all radionuclides that could contribute greater than 10 percent of the uncontrolled effective dose equivalent for the release point.
 - Follow periodic confirmatory measurement schedule provided by EA.
 - Perform periodic confirmatory measurements by continuous monitoring, or a representative annual grab sample, for radionuclide emission points that have a potential to release radionuclides into the air that would cause an effective dose equivalent to or less than 0.10 mrem/yr but greater than 0.01 mrem/yr.
- Review the following information in the previous year's NESHAP Annual Report and provide changes to EA by March 1:
 - a list of the radioactive materials used at the facility
 - a description of the handling and processing that the radioactive materials undergo at the facility
 - a list of the stacks or vents or other points where radioactive materials are released to the atmosphere
 - a description of the effluent controls that are used on each stack, vent, or other release point and an estimate of the efficiency of each control device.

4.26 Performing Activities with the Potential for Fugitive Dust or Fugitive Emissions

Responsible Manager:

- Control fugitive particulate matter from becoming airborne. The following techniques may be used:
 - water or dust suppressant chemicals
 - control equipment (for example, hoods, fans and fabric filters, containment structures)
 - covering truck transporting materials likely to give rise to airborne dust
 - paving roadways where practical.

4.33 Procuring Laboratory Services for Waste Characterization

NOTE: Laboratory services (except treatability studies), as used in this section, do not include research laboratory activities conducted at or in conjunction with universities or research partnering companies internal laboratories.

Responsible Manager:

- Contact Waste Generator Services (WGS) to prepare a sampling analysis plan.
- Identify preferred external laboratory services provider.

Waste Generator Services:

- Contact the Sample Management Office to determine if the preferred laboratory is listed on the company Qualified Supplier List located at <http://home/procurement>.

Sample Management Office:

- If the laboratory is not on the approved list, contact EA to have a laboratory assessment completed prior to procuring laboratory services.
- Procure services from only a laboratory that is listed on the company Qualified Supplier List located at <http://home/procurement>.
- Maintain laboratory assessment results according to the instructions in Section 5.

4.48 Disturbing Soils or Altering Stream Channels

Responsible Manager:

- Before performing activities that disturb soil in the following areas, or before procuring goods and services for the activity, complete, submit to EA, and obtain approval of an EC (Form 451.01)
 - in a 100/500 year floodplain
 - outside a fenced facility
 - in an area greater than 50 feet from existing structure
 - in an area subject to the Industrial or Construction Storm Water Plan
 - in a stream channel (that is, soil disturbance below the high water mark of the Big Lost River, Little Lost River, Birch Creek, and all playa's and spreading areas)

OR

- if excavating or discharging fill material so EA can determine if the activity is in a wetland
 - Contact EA for assistance in making determinations.
- If the activity is outside a *facility boundary*, contact EA to request a *biological resource clearance*.

ENVIRONMENTAL CHECKLIST

EC Document No. PBF-00-002

NOTE: Biological resource clearances apply only to the INEEL Site. Facilities in Idaho Falls do not have to follow this instruction.

- If disturbing soil inside a CERCLA area of contamination [includes soils inside Idaho Nuclear Technology and Engineering Center (INTEC)], obtain Environmental Restoration approval.
- If disturbing soil at a facility within the Power Burst Facility (PBF), contact the Cultural Resource Management Office (CRMO) to obtain a cultural resource clearance.

Cultural Resource Management Office:

- Prepare a cultural resource clearance and provide a copy to the requester.

Responsible Manager:

- Proceed with the work in accordance with the approved EC, applicable permits, cultural resource clearance, and other approvals.
- Maintain permits, cultural resource clearances and other approvals according to the instructions in Section 5.

4.72 Planning to Generate Waste

Responsible Manager:

- Do not generate waste that does not have a means of disposition that meets all applicable requirements.
- Contact Waste Generation Services to plan waste characterization and disposition activities.
- Integrate pollution prevention and waste minimization into all waste generation and perform the following:
 - Each year, develop and implement the facility specific Pollution Prevention Plan.
 - Each year, determine if the goals of the waste minimization program are being met.
 - Each year, determine if the methods for the waste minimization program are the most practicable for minimizing waste.
 - Document and certify that the goals and methods used for the waste minimization program are being met and are most practicable.
- Conduct Pollution Prevention Opportunity Assessments on waste generating processes to identify waste reduction opportunities.
- Submit pollution prevention accomplishments to the INEEL Pollution Prevention Unit quarterly
- Maintain records documenting goals and waste minimization methods according to the instructions in Section 5.

4.73 Generating Waste

Generator:

- Contact Waste Generator Services upon waste generation.

Waste Generator Services:

- Implement waste management procedures.
- Maintain waste characterization records according to instructions in the appropriate waste management MCP.

Section F. NEPA Level of Documentation and Reference(s):

Summary of the Proposed Action:

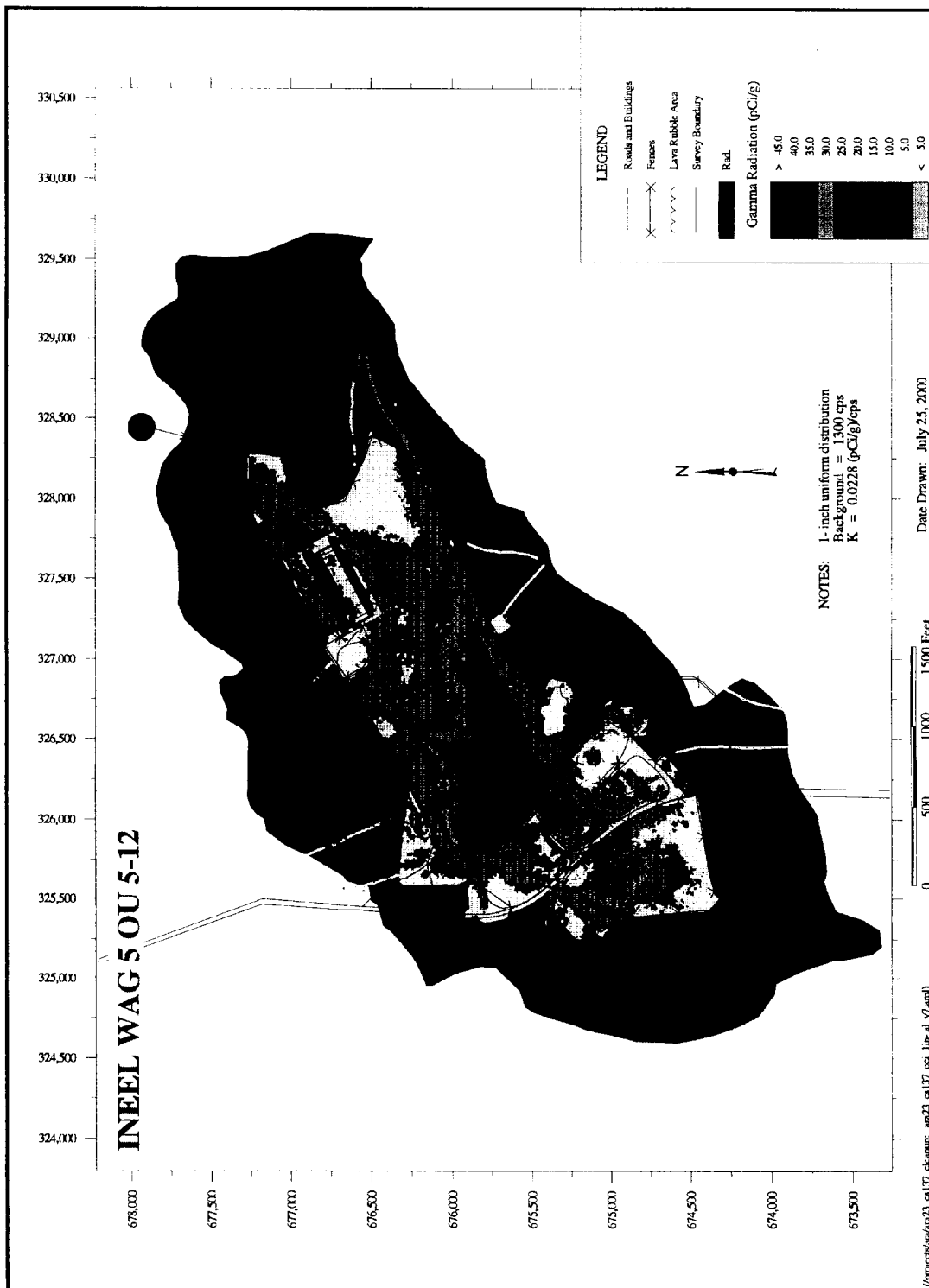
The proposed action would implement selected remedies documented in the WAG-5 ROD to mitigate the risk associated with specific sites at the INEEL. These sites include the Auxiliary Reactor Area (ARA)-01, ARA-12, and ARA-23. Management of stored and investigation-derived waste and groundwater monitoring are also components of the proposed action. Contaminated soil is the only source medium. Soil contaminated with concentrations in excess of the remediation goals would be removed using conventional earth moving equipment. Contaminated soil would be characterized and sent to the INEEL CERCLA Disposal Facility (ICDF) or another location within the INEEL for permanent disposal. Institutional controls would also be implemented as a limited action at ARA-02, ARA-03, ARA-06, ARA-16, ARA-24, ARA-25, Power Burst Facility (PBF)-10, PBF-12, PBF-13, PBF-21, PBF-22, and PBF-26.

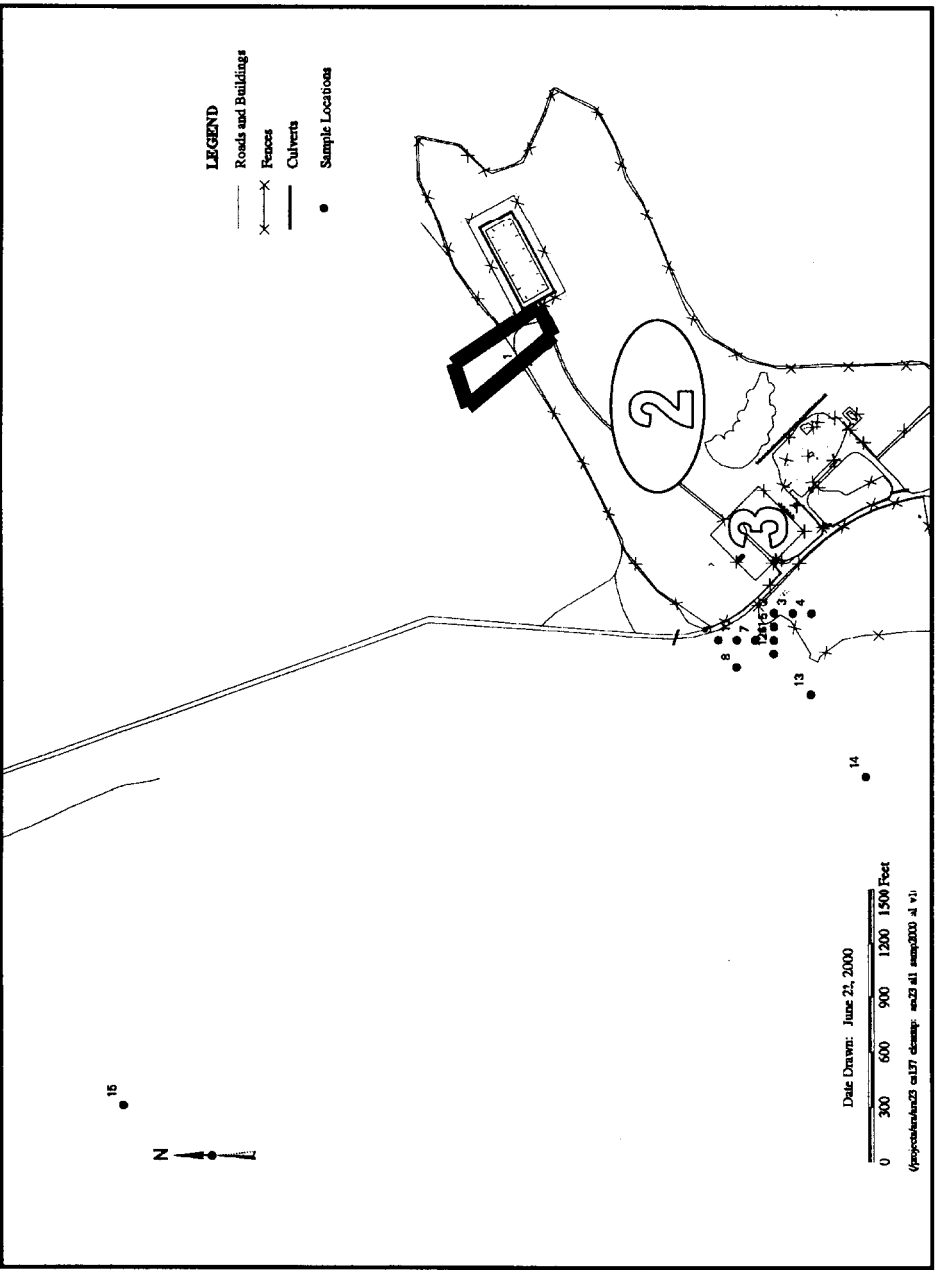
Project activities are expected to begin near October 1, 2001 and continue until FY-06 at an estimated cost of \$10,000,000.

Use of the CERCLA Process: In accordance with the June 1994 Secretarial Policy on the National Environmental Policy Act, the Department of Energy will rely on the CERCLA Process for review of actions to be taken under CERCLA. The proposed activity supports a CERCLA action and does not support the siting, construction, or operation of a treatment, storage, or disposal facility for waste management or other purposes unrelated to CERCLA. The CERCLA documents for this activity have incorporated NEPA values to the extent practicable, and the CERCLA documents will be made available to the public in accordance with the requirements of CERCLA.

CERCLA Strategy: In accordance with CERCLA § 113(k)(2)(B)(i-v) and § 117 and the INEEL Community Relations Plan, opportunities for the public to obtain information and participate in the remedial investigation and decision process for WAG 5 were provided from May 1997 through June 1999. The documents providing information and opportunities to provide input included a "kick-off" fact sheet, which briefly discussed the status of the RI/FS; various INEEL Reporter newsletter articles (a publication of the INEEL Environmental Restoration Program); three supplemental updates to the INEEL Reporter, one "update" fact sheet; a Proposed Plan; briefings and presentations to interested groups; interviews; and public meetings.

Several briefings on the WAG 5 investigation were given by DOE-ID to the INEEL Citizens Advisory Board and its Environmental Restoration Program Subcommittee. Briefings were held with members of an Idaho-based environmental organization, an organization consisting largely of retired INEEL employees, the Shoshone-Bannock tribes, several Idaho radio stations, several Idaho newspapers, national publications, and four Idaho television stations. All comments received on the Proposed Plan were considered during the development of the OU 5-12 ROD. The decision for the WAG 5 action was based on the information in the Administrative Record for WAG 5. In compliance with CERCLA, the OU 5-12 that documents the decisions made at WAG 5 has been made available for public review in the DOE WAG 5 Administrative Record.

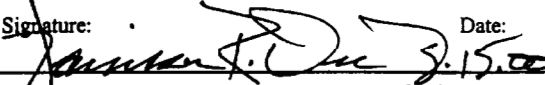
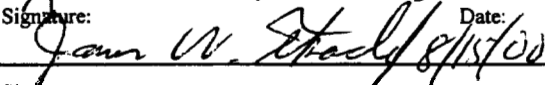




AIR PERMITTING APPLICABILITY DETERMINATION (APAD) ENVIRONMENTAL AFFAIRS

Note: This attachment serves as official transmittal of the Environmental Affairs APAD and is approved based on information and project description supplied for this determination. The undersigned agree that the information in the referenced document is true, accurate, and complete to the best of their knowledge.

Section A. Reviewer, Tracking, and Approval

Project Title: WAG 5 Comprehensive Remedial Action	
Date: August 15, 2000	Project Number:
APAD Tracking Number: 00-60	NEPA Document Number: PBF-00-002
APAD Technical Author: Harrison Orr Telephone: 526-0759	Signature:  Date: 8/15/00
APAD Technical Reviewer: Jim Tkachyk Telephone: 526-7965	Signature:  Date: 8/15/00
Air/Water Policy and Permitting Supervisor (not required for transmittal of no permitting required statements): Telephone:	Signature: _____ Date: _____
Air/Water/NEPA Policy and Permitting Manager (not required for transmittal of no permitting required statements): Telephone:	Signature: _____ Date: _____
Performing Organization Project Manager (not required for transmittal of no permitting required statements): Telephone:	Signature: _____ Date: _____
Facility Manager (not required for transmittal of no permitting required statements): Telephone:	Signature: _____ Date: _____

Section B. Air Permitting Applicability Determination

<input type="checkbox"/> Permit to Construct (PTC) required (contact DEQ)	<input type="checkbox"/> PTC Modification Required (contact DEQ)
<input type="checkbox"/> Prevention of Significant Deterioration (PSD) Permit	<input type="checkbox"/> Category I Exemption
<input type="checkbox"/> Category II Exemption	<input type="checkbox"/> Director's Exemption
<input type="checkbox"/> Further Evaluation for Permitting Required	
<input type="checkbox"/> No Permitting Required, With Conditions	<input type="checkbox"/> No Permitting Required, Without Conditions
<input checked="" type="checkbox"/> No Permitting Required, CERCLA Action with Conditions (must meet ARARs)	

Section C. Brief Description of Air Pollutant Emitting Aspects of Proposed Activity

Air emissions (fugitive dust and vehicle exhaust) would be generated when using conventional earth-moving equipment (i.e., scrapers and backhoes) to excavate and remove sludge in the seepage pit of ARA-02's sanitary waste system. Excavating and contouring activities at ARA-01, -12, -23, -25, and PBF-16, and removal of the ARA-16 radionuclide tank and associated pipes, would generate additional emissions. Air emissions would be controlled by the use of water sprays or soil fixatives to suppress dust during excavation and removal. Current radiological control practices would be implemented to minimize radiation exposures to the operators. Radiological controls could consist of limiting the amount of time an operator can work in the area, requiring personnel to wear personal protective clothing, and using distance and shielding to reduce radiation exposure. Shipping containers would be positioned near the excavations so that loaders and backhoes can place the contaminated material directly into the specified containers. Mechanisms would be used to prevent accidental release during transit such as tarps that may be unrolled over a truck box and secured. The waste would then be transported to the locations specified in the OU 5-12 ROD.

Section D. Impact (check if applicable)

<input type="checkbox"/> Additional Requirement(s) Attached	<input type="checkbox"/> Air Operating Permit Certification
<input type="checkbox"/> APAD Revision Requirement	<input checked="" type="checkbox"/> CERCLA Remedial Action
<input type="checkbox"/> Change in Stack Parameters	<input type="checkbox"/> Demolition Notification
<input type="checkbox"/> Excess Emissions Reporting	<input type="checkbox"/> Fuel Burning Equipment Particulate Matter
<input type="checkbox"/> Fuel Sulfur Content	<input checked="" type="checkbox"/> Fugitive Dust Control
<input type="checkbox"/> Incinerator Control	<input type="checkbox"/> NESHAP Asbestos Notification
<input type="checkbox"/> NESHAP Asbestos Notification CERCLA	<input type="checkbox"/> NESHAP Continuously Monitored Radionuclide
<input checked="" type="checkbox"/> NESHAP Radionuclide Actual Emissions	<input type="checkbox"/> NESHAP Subcontractor Asbestos Notification
<input type="checkbox"/> NESHAP Unabated Radionuclide Emissions	<input type="checkbox"/> Notification of Emissions Change
<input type="checkbox"/> Open Burning	<input type="checkbox"/> Particulate Matter Process Weight Limitations
<input checked="" type="checkbox"/> Portable Equipment Registration	<input type="checkbox"/> Project Status
<input type="checkbox"/> Reporting	<input type="checkbox"/> Subcontractor Internal Combustion Engine(s)
<input checked="" type="checkbox"/> Subcontractor Permitting/Registration	<input type="checkbox"/> Tier I AOP Duration
<input type="checkbox"/> Tier I AOP Renewal	<input checked="" type="checkbox"/> Visible Emissions

Section E. Summary of Requirements of Operations

NESHAP Radionuclide Actual Emissions - All radiological emissions to the environment, including those from all point and diffuse sources, must be determined for demonstrating compliance with the NESHAP Standard [see CFR 61.93 (a)] and submitted for reporting in the INEEL NESHAP's Annual Report per 40 CFR 61.94. If any fugitive radiological emissions are released, the performing organization Project Manager or Source Owner/Manager shall ensure that the calendar year emissions are determined and reported (via signed memorandum) to Jim Tkachyk by February 28 for the preceding year. Contact Jim Tkachyk (BBWI Environmental Affairs, 526-7965) for guidance on determining emissions.

Subcontractor Permitting/Registration - Subcontractors bringing "portable equipment" onto the INEEL are subject to the registration requirements of IDAPA 58.01.01.500, and must provide documentation of permitting and registration as part of the vendor data submittal. "Portable equipment" is defined as equipment which is designed to be dismantled and transported from one job site to another job site (i.e. gravel crushing operations, batch asphalt plants). Permitting and registration documentation must be maintained on-site with the applicable "portable equipment". The performing organization Project Manager shall ensure the Subcontractor submits "portable equipment" registration documentation as part of the vendor data submittal. Contact Rachael Delmore (BBWI Environmental Affairs, 526-5950) for guidance.

Fugitive Dust Control - Fugitive dust emissions that may be produced during construction, demolition, excavation, and backfilling activities must be controlled in accordance with Idaho Administrative Procedures Act (IDAPA) 58.01.01.650, "Idaho Rules for Control of Fugitive Dust". This requires that all reasonable precautions be taken to prevent the generation of fugitive dust. The performing organization Project Manager shall ensure that fugitive dust emissions for the proposed action are controlled. Some reasonable precautions may include but are not limited to, the use of water or chemicals, the use of control equipment, and the covering of trucks. For additional guidance, contact John Gill (BBWI Environmental Affairs; 526-8406).

Visible Emissions: IDAPA 58.01.01.625 - A person shall not discharge any air pollutant into the atmosphere from any point of emission for a period or periods aggregating more than three (3) minutes in any sixty (60) minute period which is greater than twenty percent (20%) opacity as determined by procedures contained in the Procedures Manual for Air Pollution Control, Section II (Evaluation of Visible Emissions Manual). (5-1-94). If visible emissions are observed from internal combustion equipment used for this project, or visible emissions are observed from other actions related to the project, the performing organization Project Manager shall ensure the visible emissions are in compliance with IDAPA 58.01.01.625. Contact Norm Stanley (BBWI Environmental Affairs, 526-5901) for guidance.

CERCLA Remedial Action - Remedial action must meet the substantive requirements of the Clean Air Act (CAA) which are considered either Applicable or Relevant and Appropriate (ARAR), and may include State of Idaho and Federal requirements. The performing organization Project Manager shall ensure CERCLA project personnel calculate projected emissions from the CERCLA remediation and maintain documentation in the CERCLA project file. Control of pollutant emissions may be negotiated with EPA subject to public review and comment. CERCLA actions involving radionuclide emissions must be reported in the NESHAP annual report.

Portable Equipment Registration - If "portable" or "stationary" equipment having combustion emissions is proposed for procurement, operations personnel must submit a "Request for Air Permitting Applicability Determination" (RAPAD) to BBWI Environmental Affairs. INEEL-owned portable equipment used on the INEEL does not require registration with the State.

Section F. Summary of Air Emissions Environmental Reports Performed by Environmental Affairs

<input type="checkbox"/> Air Emissions Inventory (phase I & II) (John Gill)	<input type="checkbox"/> Air Operating Permit (John Gill)
<input checked="" type="checkbox"/> Annual Toxics Report (Ray McDougal)	<input type="checkbox"/> Continuous Compliance Monitoring (JimTkachyk)
<input checked="" type="checkbox"/> NESHAP Annual Report (Jim Tkachyk)	<input type="checkbox"/> Periodic Confirmatory Monitoring (JimTkachyk)
<input type="checkbox"/> PSD Quarterly Report (Scott Lane)	
<input type="checkbox"/> Semi-annual Continuous Compliance Report (JimTkachyk)	

Section G. Additional Comments or Conditions

Substance	CAS#	Actual Emissions (lb/hr)	Permitted Emissions (lb/hr)	As Committed
NON-CARCINOGENIC				
Isopropyl alcohol	67-63-0		65.3	49

Isopropyl alcohol is being proposed as a decontamination medium. If this toxic is used, please note the above constraints for use. Any unabated use is considered fugitive and the entire amount is counted as being released. No more than 65.3 pounds per hour can be used for decontamination without additional air quality modeling.

No other toxic was identified in the EC.

Section H. Summary of Air Operating Permit Requirements

§ 60.42(a)

- | | |
|--|--|
| <input type="checkbox"/> Fuel Burning Equipment Particulate Matter | <input type="checkbox"/> Fuel Sulfur Content |
| <input type="checkbox"/> Incinerator Control | <input type="checkbox"/> Open Burning |
| <input type="checkbox"/> Particulate Matter Process Weight Limitations | <input type="checkbox"/> Reporting |
| <input type="checkbox"/> Tier I AOP Duration | <input type="checkbox"/> Tier I AOP Renewal |
| <input type="checkbox"/> Visible Emissions | |

§ 60.42(b) § 60.42(c)

- | | |
|---|---|
| <input type="checkbox"/> § 264 | <input type="checkbox"/> § 60, Subpart Dc |
| <input type="checkbox"/> § 60, Subpart Kb | <input type="checkbox"/> § 60.116b |
| <input type="checkbox"/> § 60.42c | <input type="checkbox"/> § 60.44c |
| <input type="checkbox"/> § 60.48c | <input type="checkbox"/> § 61, Subpart H |
| <input type="checkbox"/> § 61, Subpart M | <input type="checkbox"/> § 61.154 |
| <input type="checkbox"/> § 63.460 | <input type="checkbox"/> § 68 |
| <input type="checkbox"/> § 82 | |

Section I: Air Operating Permit Requirements

Section J: Justification for APAD

Historically, Environmental Affairs have not been involved with the development of ARAR's. No further action is required.

Is this determination consistent with the ARAR's and the emission source, with other permitting actions, and with the Environmental Checklist conclusions?

☒ YES ☐ NO

Section K: Specify NEPA Text


Section L: Chemicals IDAPA 16.01.01.585, 586 Toxic Air Pollutants

Substance	CAS	Actual Emission (lb/yr)	Potential Emission (lb/yr)	AAEC (mg/m ³)
NON-CARCINOGENIC				
Isopropyl alcohol	67-63-0		65.3	49



Brenda R Pace

08/17/2000 10:15:22 AM

To: Reed S Moser/R2M/CC01/INEEL/US@INEL
cc: Christine Hiaring/HRG/CC01/INEEL/US@INEL
Subject: Re: PBF-00-002 "WAG 5 Comprehensive Remedial Action" 

Hi Reed and Chris, thanks for providing additional detail on the activities associated with cleanup within WAG-5. A review of my survey records shows that the proposed work should have no effect on significant cultural resources and archaeological clearance is recommended for all work. As always, however, the INEEL Stop Work Authority must be invoked and the INEEL Cultural Resource Management Office consulted immediately if any cultural materials are unexpectedly encountered. Excavations associated with ARA-23 located outside the northwestern portion of the ARA perimeter fence should be watched with special care as there are known cultural resources in this vicinity. Care must also be taken to avoid any additional damage to the small lava tube cave located within the fenced ARA perimeter. This site is located in the small fenced area southwest of the main road leading to the facility. Based on the map provided, the cave appears to lie south of the proposed excavation (drawing C-6) and should not be impacted if the work is completed as planned.

Thanks for your continuing efforts to protect cultural resources within WAG-5! Please don't hesitate to call if you have questions or if I can be of additional assistance. --Brenda-



Environmental Science and Research Foundation, Inc.

101 S. Park Ave. Suite 2; P.O. Box 51838 • Idaho Falls, ID 83405 • 208-525-7160 • Fax: 208-525-7036
Email: majorss@esrf.org • Web Page: <http://esrf.org>

August 30, 2000

Mr. Roger L. Twitchell
NEPA Compliance Officer
U. S. Department of Energy
Idaho Operations Office
850 Energy Drive, MS 1216
Idaho Falls, ID 83401-1563

Subject: WAG 5 Comprehensive Remedial Action (PBF-00-002)

Dear Mr. Twitchell:

This letter provides recommendations in support of NEPA for activities related to the remediation of sites located in the Auxiliary Reactor Area (ARA)-01, ARA-03, ARA-12, ARA-23, ARA-24, ARA-25, and Power Burst Facility (PBF)-10, PBF-13, PBF-21, PBF-22, and PBF-26. Remediation activities fall under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Remediation efforts include management of stored and investigation-derived waste, groundwater sampling, and the removing of soil that has concentrations in excess of the remediation goals.

The proposed remediation areas have been previously disturbed. The soils of these areas are silty-clay. The area is dominated by sagebrush, grey rabbit brush, crested wheatgrass and a variety of native grasses. Plant cover is approximately 20 percent.

The Foundation recommends a weed management plan and a revegetation plan be prepared prior to initiation of any soil removal activities. The Foundation recommends the size of the area disturbed be kept to as small as possible and all roads leading into the area be mowed instead of bladed. All sites should be reseeded to native species upon completion of the remedial actions. The Foundation can assist the project manager with details on reseeding.

Some of the areas proposed for these activities are likely used by a diverse complement of small mammals, reptiles, and breeding bird species common to the sagebrush steppe. Some former Candidate species for listing as Threatened or Endangered (e.g. ferruginous hawk, loggerhead shrike and sagebrush lizard) are known to use these general areas. Big game animals likely using these areas include pronghorn and mule deer.

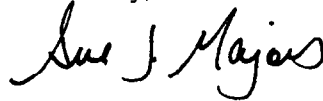
The areas likely to be affected by these activities have been previously disturbed. It is unlikely the proposed activities will have any measurable impact on species of federal or state concern.

Environmental Science & Research Foundation, Inc.
Page: 2
August 30, 2000

There are no federally listed or proposed threatened or endangered species, species of special concern, or records thereof, or designated critical habitat in proximity to the project area. It is our opinion a biological consultation with the U.S. Fish and Wildlife Service is not necessary for these activities.

If you have any questions regarding this evaluation, please contact me at the letterhead phone number.

Sincerely,

A handwritten signature in black ink, appearing to read "Sue J. Majors". The signature is fluid and cursive, with the first name "Sue" and last name "Majors" clearly distinguishable.

Sue J. Majors
Research Technician

cc: J. S. Irving, Bechtel BWXT, MS 3428
R. S. Moser, Bechtel BWXR, MS 3427
C. M. Hiaring, Bechtel BWXT, MS 3950
Foundation Files

INTEROFFICE MEMORANDUM

Date: August 29, 2000

To: C. M. Hiaring MS 3950 6-2719

From: D. R. Braun *DLB/ma* MS 4110 6-8409

Subject: WATER RESOURCES REVIEW OF WAG 5 COMPREHENSIVE REMEDIAL ACTION

Water Resources personnel must review projects that disturb more than 10 acres outside of the storm water corridor according to the *INEEL Storm Water Pollution Prevention Plan for Construction Activities* (DOE/ID-10425), Section 4.2, "Types of Project SWPPP-CAs." Personnel must evaluate the need for a study to determine if there is a potential for the project to negatively impact aquatic habitat or waters of the United States, including wetlands.

The WAG 5 Comprehensive Remedial Action project (Environmental Checklist PBF-00-002) is expected to disturb approximately 23 acres near Auxiliary Reactor Areas I and II. July 13, 2000, Water Resources personnel, E. D. Walker and myself, observed the project area. The area is sagebrush steppe. We observed indications of historical wastewater discharges. We did not observe indications of potential aquatic habitat. There is no need to study potential negative impacts to aquatic habitat.

cc: R. S. Moser, MS 3428
K. D. Fritz, MS 3650
C. A. Reno, MS 4110
E. D. Walker, MS 4110 *EDW*
D. R. Braun File (DRB-07-00)
Uniform File Code: 6106/CFL-2